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EXAMINER

RUTTEN, JAMES D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/972,076	Applicant(s) JOHNSON ET AL.	
	Examiner JAMES RUTTEN	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 84-103 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 84-103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/27/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's submission filed 1/12/09, responding to the 12/28/08 Office action which detailed the rejection of claim 83. Claim 83 has been canceled, and new claims 84-103 have been added. Claims 84-103 remain pending in the application and have been fully considered by the examiner.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 83 is directed to "a tangible machine-readable storage medium." However, no description of any tangible machine-readable storage media was found in the specification. However, a reference to a "computer system 101" is found on page 17 in reference to Fig. 1. Further, a "personal computer" is also referenced on page 17, as well references to other such systems depicted in Fig. 1. While computer systems and personal computers are known to contain at least hard disk drives which can be used as a machine-readable storage medium, no explicit description of any media was found.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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4. Claims 84 and 87 are rejected under 35 U.S.C. 102(a) as being anticipated by US 6085220 to Courts et al. ("Courts").

As per claim 84, Courts et al. teach a computer (See column 6 lines 10-50, e.g. "computer system," "stores," and "memory." Such computer systems contain computer-readable storage media for storage of executable computer instructions), for an all-purpose decision service/server/engine returning a real-time decision in ASP mode to an end user/client (e.g., col.3:24-27 & 34-35, col.7:38-46, col.9:30-35),

Courts further discloses:

receiving data characterizing at least one rule for making decisions based on an input data; e.g., see business logic & business object 22 FIG.1 & associated text at least at column 3 lines 61-64:

Business layer 16 provides the business logic for the web system. Business layer 16 includes the business rules of the system which are carefully isolated from the presentation layer. The business rules can be implemented as COM business objects 22 within business layer 16.

Also column 4 lines 3-5, e.g. "business rule development."

generating at least a portion of a web page for receiving the input data, the portion of the web page corresponding to the at least one rule; e.g., see Abstract, see interaction layer 12 & HTTP FIG.1 & associated text, col.9:30-32; col.4:13-16. Also see column 3 lines 34-37:

Presentation Layer 14 can server to **generate web pages** for interaction with the user. In one implementation, presentation layer 14 includes hypertext markup language (HTML) pages augmented by a special set of tags. [emphasis added]

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generating a decision service for producing an output by applying the at least one rule to the input data, the output corresponding to at least one recommendation, reason code, decision or a score; e.g., col.1:56-58, col.3:47-53:

Further, using a server side tag set and standard HTML, developers can create a large proportion (e.g., 90%) of all pages without custom code. At the same time, such pages can have the power to access information in legacy systems through integration layer 18, **utilize business rules in business layer 16 to make complicated decisions, and display customized content.** [emphasis added]

Also see *html generation* FIG.1 & associated text. Note that generation of a service must occur in order to a decision to occur. That is, without a decision service, a decision would not be made.

receiving the input data from a user via the web page; e.g., see Abstract, see interaction layer 12 & HTTP FIG.1 & associated text, col.4:13-16, and also col.9:30-32:

The request is commonly an HTTP request generated by remote user software such as a web browser.

invoking the decision service to produce an output by applying the at least one rule to the input data; and e.g., col.1:56-58-

A business layer is coupled to the presentation layer and provides **business logic for use by the presentation layer in generating the responsive web pages.** [emphasis added]

Note that the business logic must be *invoked* by the presentation layer in order to generate the responsive web page. Also col.3:51-52,61-64, also see *html generation* FIG.1 & associated text.

delivering the output to the user. e.g., see Abstract, col.1:52-54, also see column 9:53-54: "When the web page is built, it is sent to the requesting user."

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In regard to claim 85, the above rejection of claim 84 is incorporated. Courts further discloses: *wherein the at least one rule comprises at least one model, expression or a strategy.* e.g., see column 3 lines 64-65 which discloses business rules as expressions in COM business objects.

In regard to claim 87, the above rejection of claim 84 is incorporated. Courts further discloses: *wherein the at least one rule corresponds to a project, the project corresponds to a plurality of rules.* e.g., see project database 148 FIG.2B & associated text.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 86 is rejected under 35 U.S.C. 103(a) as being unpatentable over Courts as applied to claim 84 above, and further in view of U.S. Patent 6,466,971 to Humpleman et al. (“Humpleman”).

In regard to claim 86, the above rejection of claim 84 is incorporated. Courts does not expressly disclose: *generating xml schema corresponding to the at least one rule; generating an xml parser for extracting the input data conforming to the xml schema; and, invoking the xml*

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parser to extract the input data conforming to the xml schema from the web page. However, Humpleman et al. discloses sending XML input data (e.g., see commands/XML FIG.14 & associated text, see XML-RPC Action FIG.19) from an end user/client system (e.g., see A FIG. 14 & associated text, see HN Device A: Controller Module FIG.19 & associated text) to a decision server (e.g., see S FIG.14 & associated text, see HN Device B: Controller Module FIG.19 & associated text) via a web server (e.g., see server 14 FIG.14 & associated text, see HN Device Web Server 86 FIG.19 & associated text). Humpleman et al. further discloses generating an XML schema for providing to the client system for collecting said input data and providing to Web server for use in error handling, or data validation (e.g., see CALL.DTD & INTERFACE.DTD & Web Server Layer FIG.18 & associated text, see Device A XML Interface 72 FIG.19 & associated text) and generating an XML parser (e.g., see XML Layer IN 70 & XML Layer OUT 68 FIG.18 & associated text, see XML parser 74 FIG.19 & associated text) for reading data conforming to said XML schema. Note that XML parser 74 must first be generated before being used. It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to modify Courts et al.'s teaching to include the teaching as set forth by Humpleman et al. to produce the expected result with reasonable success. And the motivation for doing so would have been that the formatting of data into syntactically correct XML document(s) depends upon adhering to a predefined definition language describing the structure and set of constraints (i.e., XML schema) on which an XML documents shall be constructed from said data. Furthermore, XML parsers enable the processing and extracting of data in textual representation within XML tags and transforming them into specific-typed objects/data structure (e.g., C, C++, or Java objects) which can be retrieved for use by servers

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and software applications. XML parsers check XML documents being parsed for conformance to XML rules. Most recent XML parsers, at the time the invention was made, are implemented with integrated support for XML schemas to further enable data validation.

7. Claims 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts as applied to claim 84 above, and further in view of U.S. Patent 6018732 to Bertrand et al. (“Bertrand”).

In regard to claim 88, the above rejection of claim 84 is incorporated. Courts further discloses: *wherein the at least one rule is validated*. See column 4 lines 8-10, i.e. “unit tested.” Courts does not expressly disclose: *by a plurality of simulated transactions*. However, Bertrand et al. disclose a method and apparatus for returning real-time decisions/scores/calculated results (e.g., see Abstract, see FIG.2 & associated text), wherein rules are tested in runtime mode by a test service comprising a wrapper (e.g., see presentation 210, activity 220 FIG.2 & associated text, see col.21:55-62, FIG.8 & associated text). Bertrand further discloses simulation models for validating simulated transactions (e.g., see simulation engine 270, simulation models 260 FIG.2 & associated text, in particular, see column 11 lines 10-15, e.g. “simulation inputs”). It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to incorporate the teaching of Bertrand et al. into that of Courts to obtain runtime test service comprising a wrapper for the control panel and for an Excel testing program. And the motivation for doing so would have been that the usage of Excel spreadsheets in

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the test service/program enables business logic/rules/functions to be collected, and simulated for testing purpose. Also, simulation allows design components as suggested by Bertrand (see column 11 line 9).

In regard to claim 89, the above rejection of claim 88 is incorporated. Bertrand further discloses: *generating a test report corresponding to the plurality of simulated transactions*. See column 11 lines 13-15, i.e. "notifies the system of the status." It would have been obvious to one of ordinary skill in the pertinent art at the time the invention was made to use Court's unit test with Bertrand's test reports in order to obtain appropriate feedback as suggested by Bertrand (see column 11 line 15).

8. Claims 90-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts as applied to claim 84 above, and further in view of U.S. 6,687,873 to Ballantyne et al. ("Ballantyne").

In regard to claim 90, the above rejection of claim 84 is incorporated. Courts does not expressly disclose: *wherein the at least one rule is received from a rule designing software, the rule designing software having a graphical user interface adapted for graphical illustration of the at least one rule*. However, Ballantyne teaches the use of software for designing rules using a graphical user interface. See at least Fig. 1 element 30 and associated text in column 6 lines 63-65, e.g. "modeling/mapping graphical user interface 30." It would have been obvious to one of ordinary skill in the

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pertinent art at the time the invention was made to incorporate *Ballantyne's* rule designing software with *Courts'* rules in order to reduce the time and expense of system modification as suggested by *Ballantyne* (see column 4 lines 50-54).

In regard to claim 91, the above rejection of claim 91 is incorporated. Courts does not expressly disclose: *wherein the graphical illustration of the at least one rule is provided in a form of a tree or a graph.* However, *Ballantyne* discloses this in Fig. 6 element 56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use *Courts'* rules in order to reduce the time and expense of system modification as suggested by *Ballantyne* (see column 4 lines 50-54).

9. Claims 92, 93, 96, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts as applied to claim 84 above, and further in view of U.S. Patent 5,999,911 to Berg et al. ("Berg").

In regard to claim 92, the above rejection of claim 84 is incorporated. Courts does not expressly disclose: *wherein the at least one rule corresponds to a project comprising expression sequences, segmentation trees and workflow lists arranged into a user-selected order,* However, Berg teaches interactive creation of workflow using expression sequences and segmentation trees. See at least column 4 lines 14-17, i.e. "interactively create a workflow definition. Berg further teaches:

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the expression sequences assigning values to one or more fields, See Figs. 5 and 6, also see associated text in at least column 9 lines 18-20: "When the designer clicks on a graphic representing a step in the flow builder, the flow builder displays a "BASIC ATTRIBUTES" dialog box as shown in FIG. 5." The field values are saved as expression sequences in text based flow definition language as described in column 9 lines 63-66.

the workflow lists corresponding to one or more workflow steps processed during a run-time execution, See at least column 16 lines 29-34, e.g. "When a user elects to open the "flowname.flow" workflow file, the workflow manager displays the flow setting steps to the states mandated by their dependencies. After opening the workflow file, the user(s) can begin to perform work with the workflow."

the segmentation trees arranging workflow steps into one or more nodes configured in tree branches. See Fig. 4; also see the associated text in at least column 9 lines 8-11, e.g. "To create a step, the designer can select one of the step icons, which include a task step 104, an activity step 106, a decision step 108, and a subflow step 110." Designers create workflow by using the "segmentation trees" shown in Fig. 4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's teaching of workflow with Courts' decision service in order to utilize improved methods for managing complex design processes as suggested by Berg (see at least column 2 lines 24-26).

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In regard to claim 93, the above rejection of claim 92 is incorporated. Courts does not expressly disclose: *wherein the user-selected order is sequential or hierarchical*. However, Berg further teaches a hierarchical order. See column 4 line 25, e.g. “dependency relationships.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's teaching of hierarchical ordering with Courts’ decision service in order to utilize improved methods for managing complex design processes as suggested by Berg (see at least column 2 lines 24-26).

In regard to claim 96, the above rejection of claim 92 is incorporated. Courts further discloses use of a model. See at least column 4 lines 61-63, i.e. “profile.” Courts does not expressly disclose the remaining limitations. However, Berg further teaches: *wherein at least one of the expression sequences, segmentation trees and workflow lists reference at least one model*. See Berg column 4 line 25, i.e. “template.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's model referencing with Courts’ model in order to utilize improved methods for managing complex design processes as suggested by Berg (see at least column 2 lines 24-26).

In regard to claim 103, the above rejection of claim 92 is incorporated. Courts does not expressly disclose: *wherein the projects are configured using an inventory of project items, the inventory of project items comprising one or more expression sequences, segmentation trees and workflow lists*. See at least column 7 line 2, i.e.

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“workflow management database.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's inventory with Courts' model in order to manage workflow as suggested by Berg.

10. Claim 94 is rejected under 35 U.S.C. 103(a) as being unpatentable over Courts and Berg as applied to claim 92 above, and further in view of U.S. Patent 4,931,928 to Greenfeld (“Greenfeld”).

In regard to claim 94, the above rejection of claim 92 is incorporated. Courts and Berg does not expressly disclose: *wherein the expression sequences are configured by using a table with at least three columns, the first column displaying an identifier of a data field, the second column displaying a data type of the data field, the third column displaying at least one of the field, value, or expression that is assigned to the data field.* However, Greenfeld teaches use of a symbol table providing a dictionary of symbols defining type and name-spaces (i.e. "field") for the symbol. See column 5 lines 5-8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's expression sequence with Greenfeld's symbol table in order to provide a dictionary of symbols available in a program, thereby providing reference for variables.

11. Claim 95 is rejected under 35 U.S.C. 103(a) as being unpatentable over Courts and Berg as applied to claim 92 above, and further in view of U.S. Patent 5,475,588 to Schabes et al. (“Schabes”).

In regard to claim 95, the above rejection of claim 92 is incorporated. Courts and Berg does not expressly disclose: *wherein the nodes arranged in tree branches are executed top-down, from left to right*. However, Schabes teaches traversing trees in a top-down, left-right manner. See column 23 lines 50-52. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Berg's nodes with Schabes' top-down/left-right traversal in order to provide an efficient traversal as suggested by Schabes (see column 23 lines 34-44).

12. Claims 97-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts and Berg as applied to claim 96 above, and further in view of Bertrand.

In regard to claim 97, the above rejection of claim 96 is incorporated. Courts and Berg does not expressly disclose: *wherein the at least one model comprises one or more characteristics and one or more attributes corresponding to the one or more characteristics*. However, Bertrand teaches the use of characteristics and attributes. See at least column 21 lines 56-58, i.e. "property" and "particular value," respectively. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Courts' model with Bertrand's "characteristics and attributes" in order to represent objects in a model that can be used in a simulation as suggested by Bertrand (see column 21 lines 15-27).

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In regard to claim 98, the above rejection of claim 97 is incorporated. Courts and Berg does not expressly disclose: *wherein the at least one model is configured to assess a data record based on at least one characteristic, the at least one model is further configured to generate a score based on the at least one attribute corresponding to the at least one characteristic.* However, at column 154 lines 8-22, Bertrand teaches assessing a data record (e.g. "expert metrics") based on characteristics (e.g. "% down") and generating scored based on attributes (e.g. "appropriate conclusion.") It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Courts' model with Bertrand's teachings of data records and scores in order to provide appropriate conclusions regarding complex decisions as suggested by Bertrand.

In regard to claim 99, the above rejection of claim 97 is incorporated. Courts and Berg do not expressly disclose: *wherein at least one characteristic corresponds to a predictive variable.* However, Bertrand teaches predictive variables at least at column 154 lines 10-13, e.g. "% down." Each of these variables predict whether a home purchase would be a good buy. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Courts' model with Bertrand's predictive variables in order to provide appropriate conclusions regarding complex decisions as suggested by Bertrand.

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13. Claim 100 is rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, Berg, and Bertrand as applied to claim 99 above, and further in view of U.S. Patent 4,772,882 to Mical ("Mical").

In regard to claim 100, the above rejection of claim 99 is incorporated. Courts, Berg, and Bertrand do not expressly disclose: *wherein the predictive variable is selected automatically*. However, Mical teaches automatic selection of variables. See column 9 lines 20-25, i.e. "automatically selected." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Bertrand's predictive variables with Mical's automatic selection in order to select items simply and expediently as suggested by Mical (see column 1 lines 41-44).

14. Claims 101-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts and Berg as applied to claim 96 above, and further in view of "An additive reliability model for the analysis of modular software failure data," by Xie et al (hereinafter "Xie")

In regard to claim 101 the above rejection of claim 96 is incorporated. Courts and Berg do not expressly disclose: *wherein the at least one model is a discrete additive model*. However, Xie teaches the use of an additive model. See Section 2 on page 189, i.e. "additive model." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Xie's additive model with Courts' model in order to utilize available knowledge as suggested by Xie (see top of left column, page 190).

In regard to claim 102, the above rejection of claim 96 is incorporated. Courts and Berg do not expressly disclose: *wherein the at least one model produces a score as a result of an execution*. However, Xie teaches production of a score as a result of a calculation. See bottom of left column on page 189, i.e. "expected cumulative number." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Courts' model with Xie's "score" in order to assess a system as suggested by Xie (see bottom right column on page 188).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES RUTTEN whose telephone number is (571)272-3703.

The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Derek Rutten/
Examiner, Art Unit 2192